This listing of the claims replaces all prior versions in the application.

Listing of Claims:

1. (Currently Amended) Resorbable bone replacement and bone formation material ~~(augmentation material)~~ based on porous β-tricalcium phosphate (β-TCP), ~~which can be~~ produced by

(a) baking a phosphate powder of a chemical composition having ~~the~~ residue on baking ~~of~~ which yields theoretically chemically pure tricalcium phosphate;

(b) forming blanks having microporosity using the baked β-tricalcium phosphate (β-TCP); and

(c) providing the baked blanks with generally tubular pores,

wherein

the β-tricalcium phosphate (β-TCP) is baked at least twice ~~and especially at least three times~~ and the formation of the thermodynamically stable adjacent phases of β-TCP is ~~prevented~~ inhibited ~~by~~, wherein the method further comprises:

(i) powdering a ~~the~~ presynthesis product obtained according to step (a),

(ii) optionally baking the powdered presynthesis product together with phosphate powder according to step (a) and powdering the material obtained and optionally repeating step (ii) at least once; ~~or more than once~~,

(iii) compressing the powdered product obtained in step (i) or step (ii) ~~together with phosphate powder according to step (a)~~ to form the blanks of step (b) and subjecting the blanks formed to final ceramic baking; and

(iv) subjecting the ~~compressed or~~ baked blanks, at least about 99.5% of which consists of pure β-tricalcium phosphate (β-TCP), to step (c) ~~(b)~~.

2. (Currently Amended) Formation material according to claim 1, wherein the formation material has chemical and crystalline purity, ~~the~~ a ~~fabric~~ structure, ~~the~~

microporosity and ~~the~~ macroporosity that ~~of the augmentation material~~ make possible rapid, foreign-body-reaction-free, biochemically orientated integration and resorption in bone.

3. (Currently Amended) Resorbable bone replacement and bone formation material ~~according to claim 1, which can be~~ produced by

(i) ~~starting from a presynthesis product obtainable by~~ baking phosphate powder of a chemical composition having a ~~the~~ residue on baking ~~of~~ which yields theoretically chemically pure tricalcium phosphate as a presynthesis product, and powdering that presynthesis product~~,~~;

(ii) ~~optionally~~ baking the powdered presynthesis product ~~together with phosphate powder according to step (i)~~ and powdering the material obtained and optionally repeating step (ii) at least once ~~or more than once,~~ ;

(iii) compressing the powdered product obtained in step ~~(i) or step~~ (ii) ~~together with phosphate powder according to step (i)~~ to form shaped blanks having microporosity and subjecting the blanks formed to ~~final~~ ceramic baking; and

(iv) providing the compressed ~~or~~ baked blanks with generally tubular macropores.

4. (Previously Presented) Formation material according to claim 1, obtainable by baking at a temperature below 1200°C in the β-tricalcium phosphate (β-TCP) phase region.

5. (Currently Amended) Formation material according to claim 1, obtainable by using in step (ii) and/or step (iii) from 1 to 50% by weight, especially from 1 to 25% by weight, phosphate powder, the weight (based on the total weight of phosphate powder and already baked material.)

6. (Currently Amended) Formation according to claim 1, wherein the baked β-tricalcium phosphate (β-TCP) comprises sintered primary particles, wherein the blanks have a generally uniform sintered structure with ~~has a uniform,~~ interconnected microporosity having

pore widths in the region of from about 2 µm to 15 µm and/or a ~~the~~ matrix of the β-tricalcium phosphate (β-TCP) primary particles ~~augmentation material~~ that is tightly sintered to microporosity, especially with microparticles that are loosely bound in the sintered structure and/or phagocytosable, having a diameter of max. 15 µm, being absent.

7. (Currently Amended) Formation material according to claim 1, wherein the baked blanks comprise a microporosity of at least about 20% by volume ~~or more, preferably from 20 to 40% by volume, and especially 30% by volume or more~~, based on the overall porosity, the overall porosity defined by ~~(consisting of~~ micro- and macro-porosity~~)~~.

8. (Currently Amended) Formation material according to claim 1, wherein the compressing step comprises ~~obtainable by~~ providing the compressed blank with tubular pores with the aid of a compression mould of optionally more than one part.

9. (Currently Amended) Formation material according to claim 1, wherein the providing the baked blanks with generally tubular pores comprises ~~obtainable by~~ providing the baked blank with generally tubular pores by ~~means of~~ milling and/or drilling.

10. (Currently Amended) Formation material according to claim 1, wherein ~~the formation material~~ the blanks ~~is~~ are in block form having a block surface, with 2- or 3-dimensionally oriented macroscopic generally tubular pores passing through each block, which are in each case arranged generally perpendicular to the block surface and/or to an imaginary plane laid through the block or against the block and form an interconnecting system of tubular pores.

11. (Previously Presented) Formation material according to claim 10, wherein a block intended for implantation, together with its tubular pores, can be so oriented for implantation

or on processing prior to implantation that at least one direction of orientation of the tubular pores corresponds to a biomechanically or biofunctionally intended direction of growth.

12. (Currently Amended) Formation material according to claim 1, wherein the tubular pores ~~that~~ have radii in the region of from about 100 µm to about 2000 µm ~~and especially from 200 to 2000 µm~~.

13. (Currently Amended) Formation material according to claim 1, wherein the blanks are ~~formation material, present~~ in block form~~, is~~ , each block comprising ~~penetrated by the~~ tubular pores that are spaced apart at a defined spacing with respect to one another, ~~especially that a~~ spacing ~~that~~ corresponds to a wall thickness of less than ~~not more than from~~ about ~~1500 to~~ 4000 µm ~~and especially from 2000 to 3000 µm~~.

14. (Currently Amended) Formation material according to claim 1, wherein the blanks have an overall porosity, defined by ~~(consisting of~~ micro- and macro-porosity~~)~~ , of more than about 50% by volume.

15. (Currently Amended) Formation material according to claim 1, wherein a the blanks with the generally tubular pores have a macroporosity of from 25 to 50% by volume, and especially from 30 to 40% by volume, based on the overall porosity, defined by ~~(consisting of~~ micro- and macro-porosity~~)~~.

16. (Currently Amended) Formation material according to claim 1, wherein the blanks have a block form that is a simple geometric shape~~, especially that of a cube, cuboid, taper, cone or disc~~.

17. (Currently Amended) Formation material according to claim 1, wherein ~~it is~~ the blanks define a semi-finished product, ~~especially~~ configured to allow ~~for~~ subsequent

mechanical processing~~, preferably~~ and/or for individual adaption in the case of bone defect in mouth or jaw medicine, orthopaedic surgery or trauma surgery.

18. (Currently Amended) Formation material according to claim 11, wherein the blank material is compressed, ~~especially~~ baked and/or sintered, only to a degree such that it can be processed using medical or dentistry tools available to a ~~the~~ practitioner, ~~especially using a rasp, file, scalpel or dentist's instrument~~.

19. (Currently Amended) Formation material according to claim 11, wherein the block ~~it~~ has been brought into the form of an individual prosthesis with the aid of a medical CAD/CAM method.

20. (New) Formation material according to Claim 16, wherein the simple geometric shape is generally one of a cube, a tapered body, a rectangular box-like body, a wedge, a cone, a cylinder or a disc.

21. (New) A method of producing resorbable bone replacement and bone formation material, comprising:

(i) baking phosphate powder of a chemical composition having a residue on baking which yields theoretically chemically pure beta-tricalcium phosphate as a presynthesis product, and powdering that presynthesis product;

(ii) baking the powdered presynthesis product and powdering the baked material obtained and optionally repeating step (ii) at least once;

(iii) compressing the powdered product obtained in step (ii) to form blanks;

(iv) baking the blanks, wherein the compressed baked blanks have a generally uniform sintered structure with interconnected microporosity having pore widths between about 2 μm to about 15 μm; and

(v) providing the compressed baked blanks with generally tubular macropores.

22. (New) A method of fabricating a biocompatible resorptive and/or resorbable bone augmentation product, comprising:

compressing granular and/or powder form ß-tricalcium phosphate into a shaped body; then

heating the compressed ß-tricalcium phosphate shaped body; then

forming macropores in the shaped body.

23. (New) A method according to Claim 22, wherein the shaped body is a blank, the method further comprising forming the blank into a desired configuration after the compressing and heating steps.

24. (New) A method according to Claim 22, further comprising, before said compressing step, sintering the granular and/or powder form ß-tricalcium phosphate at least once.

25. (New) A method according to Claim 23, wherein the compressing step employs granular and/or powder form ß-tricalcium phosphate material that has been exposed to heat a plurality of times at a temperature below 1200 °C but sufficient to sinter the ß-tricalcium phosphate material to inhibit the formation of thermodynamically stable adjacent phases of ß-tricalcium phosphate.

26. (New) A method according to Claim 22, wherein the heating step comprises baking the shaped body to a predetermined temperature for a predetermined time.

27. (New) A method according to Claim 22, wherein the shaped body comprises a sintered structure of interconnected micropores with securely attached microparticles of the granular and/or powder form ß-tricalcium phosphate.

28. (New) A method according to Claim 22, wherein the shaped body comprises ß-tricalcium phosphate material having primary particles that have a particle diameter size that is greater than about 15µm and are sintered together and to define an interconnected matrix of micropores.

29. (New) A method according to Claim 22, wherein the heating step comprises baking the shaped body, and wherein the forming the macropores step comprises introducing generally tubular apertures into and/or through the baked shaped body.

30. (New) A method according to Claim 22, wherein the forming macropores step comprises machining, milling and/or drilling generally tubular apertures into the shaped body.

31. (New) A method according to Claim 22, wherein the shaped body has a microporosity of about at least 20% by volume prior to the forming macropores step.

32. (New) A method according to Claim 31, wherein the forming macropores step comprises inserting sufficient macropores in the shaped body to provide a macroporosity of at least about 20% of the total porosity of the shaped body.

33. (New) A method according to Claim 22, wherein the forming macropores step comprises drilling and/or milling elongate generally tubular macropores into the shaped body.

34. (New) A method according to Claim 22, wherein the forming macropores step comprises inserting a plurality of the macropores into the shaped body to be aligned generally parallel to each other and spaced apart so that the material thickness therebetween is about 3 mm or less.

35. (New) A method according to Claim 22, wherein the heating step comprises sintering the shaped body.

36. (New) A method according to Claim 23, further comprising configuring the shaped body with the macropores into a custom implantable shape at a use site.

37. (New) A method according to Claim 22, wherein the forming macropores step comprises inserting generally tubular apertures therein so that a plurality of the tubular apertures extend in a generally common direction through the shaped body so that, in position, the plurality of tubular apertures can be aligned with a primary growth direction of adjacent host bone in a target implant site.

38. (New) A method according to Claim 23, wherein the shaped body is a blank having the general shape of at least one of a cube, a cuboid, a tapered body, a wedge, a cone or a disc.